3:Chinnery G, E-5 (1929)1931 OM10 New Ireland OM10

128 The third table deals with the fruitfulness of unions, classifying unions where no issue has occurred under the heads of "newly married," "husbands working away from village," "husband or wife dead," or "wife still young," the balance being classed "apparently sterile." In all classes, other than this last, issue is probable at a subsequent date. In further columns the fruitful unions are classified according to the number of issue from one to ten, and the average issue and average survival per fruitful union is given. Particulars of masculinity of births, infantile mortality, issue dying, issue surviving and population divided into adults and children are also given. Columns showing the number of females at reproductive age and the number of persons who are aged, complete this table.

128 163 The acceptance of the issue rates for comparative purposes must be made with reservations, because the ages of the parties to unions and the length of time the union has existed or may exist are unknown quantities, whose individual values will certainly vary very greatly and of which the average values will probably vary from village to village.

The average issue per union for the East coast of New Ireland was 2.0, of whom 1.6 survived the lactation period and 1.3 survived to date of inquiry. The figures for average issue per union varied from 1.1 in the village of Kulangit to 4.3 in Kanagnusgnus; for survival of lactation period per union from 0.9 in Kantebu and Bumbuwe to 3.1 in Kanagnusgnus; and for survival to date of inquiry per union from 0.5 in Konobin and Lemaris to 2.1 in Kanagnusgnus.

The average issue per fruitful union varies from 1.6 in Kulangit to 4.3 in Kanagnusgnus and the survival to date of inquiry per fruitful union from 0.8 in Panatgin to 2.3 in Madina. The average issue per fruitful union for the whole area covered by the inquiry was 2.7 (survivals to date 1.7).

2. NEW IRELAND, EAST COAST.—ISSUE AND SURVIVAL OF UNIONS.

Village Group.	Number of Unions.	Issue.			Issue per Union.	Issue died during Lactation.				Issue survived Lactation.			Issue Survived Lactation per Union.	First Born Children died during Lactation.			Issue died to Date.				Issue Survived to Date.			Issue Survived to Date as per cent. of Issue.
		Males.	Females.	Total.		Males.	Females.	Total.	Per cent.	Males.	Females.	Total.		Males.	Females.	Per cent.	Males.	Females.	Total.	Per cent.	Males.	Females.	Total.	
Kulangit	4	20	7	27	1.1	1	1	2	7	19	6	25	1.0	..	..	..	4	1	5	18	16	6	22	0.9
Bagali	44	31	26	57	1.2	1	2	3	5	30	24	54	1.2	..	..	..	5	4	9	15	27	21	48	1.6
Mungai	30	21	15	36	1.2	2	1	3	8	19	14	33	1.1	2	2	8	7	8	15	42	15	8	23	0.7
Omo	81	63	57	120	1.4	6	14	20	16	57	43	100	1.2	2	1	15	6	7	13	35	51	36	87	1.0
Maiom	32	29	25	54	1.6	1	1	2	3	28	24	52	1.6	..	1	4	12	21	33	27	23	22	45	1.4
Papliang	19	14	11	25	1.3	3	2	5	20	11	9	20	1.0	3	1	26	3	5	8	32	11	6	17	0.8
Bobsi	18	12	18	30	1.6	3	3	6	20	9	15	24	1.3	1	1	20	7	7	14	46	5	11	16	0.8
Kapliman	26	27	23	50	1.9	7	7	14	28	20	16	36	1.3	3	3	30	9	8	17	34	18	15	33	1.2
Kasciok	27	25	21	46	1.7	7	6	13	28	18	15	33	1.2	2	1	16	10	8	18	39	15	13	28	1.0
Putput	23	25	21	46	2.0	2	4	6	13	23	17	40	1.7	2	1	18	6	10	16	34	19	11	30	1.3
Nono	26	30	22	52	2.0	14	4	18	34	16	18	34	1.3	4	1	23	15	9	24	46	15	13	28	1.0
Ngavelus	29	26	28	54	1.8	5	5	10	18	21	23	44	1.5	3	0	17	12	9	21	38	14	19	33	1.1
Lovong-ai	52	85	59	144	2.7	23	11	34	23	62	48	110	2.1	10	2	26	34	17	51	35	51	42	93	1.7
Losuk	34	44	49	93	2.7	11	24	35	37	33	25	58	1.7	4	8	40	31	35	56	60	23	14	37	1.0
Mangai	42	37	39	76	1.8	12	8	20	26	25	31	56	1.3	5	2	24	19	13	32	42	18	26	44	1.0
Livitua	42	70	40	110	2.6	17	8	25	22	53	32	85	2.0	6	1	22	29	15	44	40	41	25	66	1.5
Laowan	36	40	33	73	2.0	11	8	19	26	29	25	54	1.5	5	3	36	19	15	34	46	21	18	39	1.0
Vongararum	41	37	44	81	1.9	11	13	24	29	26	31	57	1.3	7	2	31	16	17	33	40	21	27	48	1.1
Paruai	32	42	47	89	2.7	10	13	23	25	32	34	66	2.0	8	4	28	16	21	37	41	26	26	52	1.6
Lakurafanga	19	25	27	52	2.7	3	8	6	11	22	24	46	2.4	4	2	20	12	8	20	38	13	19	32	1.6
Nonapai	30	47	35	82	2.7	5	..	5	6	42	35	77	2.5	1	1	7	10	14	24	29	37	21	58	1.9
Sali	22	24	21	45	2.0	5	6	11	24	19	15	34	1.5	..	1	25	8	9	17	37	16	12	28	1.2
Lamekut	46	46	45	91	1.9	1	3	4	4	45	42	87	1.8	1	1	9	10	14	24	26	36	31	67	1.4
Fongalava	34	35	30	65	1.9	3	7	10	15	32	23	55	1.6	1	1	8	7	12	19	29	28	18	46	1.4
Luburua	23	37	35	72	3.1	6	10	16	23	31	25	56	2.4	3	2	24	10	14	24	33	27	21	48	2.0
Lakuruman	87	120	101	221	2.5	23	20	43	22	97	75	172	1.9	8	6	19	55	41	96	43	65	60	125	1.4
Munuwai	70	85	73	158	2.2	25	24	49	31	60	49	99	1.4	10	3	28	45	30	75	47	40	43	83	1.1
Larai Bina	47	56	55	111	2.3	22	16	38	34	34	39	73	1.5	9	6	40	29	31	60	54	27	24	51	1.0
Lugagun	66	95	82	177	2.6	26	27	53	29	69	55	124	1.8	13	6	33	47	37	84	47	48	45	93	1.4
Madina	64	104	76	180	2.8	17	8	25	13	87	68	155	2.4	11	6	24	39	19	58	32	65	57	122	1.9
Luaupui	62	90	83	173	2.7	27	12	39	22	63	71	134	2.1	5	2	13	51	32	83	47	39	51	90	1.4
Fisea	63	79	62	141	2.2	5	14	19	13	74	48	122	1.9	1	1	6	26	27	53	37	53	35	88	1.4
Kafkaf	37	48	38	86	2.3	2	8	10	11	46	30	76	2.0	1	1	7	13	18	31	36	35	20	55	1.4
Fatudiak	95	102	95	197	2.0	4	1	5	3	98	94	192	2.0	..	1	..	19	13	32	16	83	82	165	1.7
Limulana	42	45	48	93	2.2	7	5	12	12	38	43	81	1.9	2	2	12	17	17	34	36	28	31	59	1.4
Tandis	44	50	34	84	1.9	6	2	8	9	44	32	76	1.7	3	2	14	18	4	22	28	34	30	64	1.4

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2. NEW IRELAND, EAST COAST. ISSUE AND SURVIVAL OF UNIONS *continued.*

Village Group.	Number of Unions.	Issue.			Issue per Union.	Issue died during Lactation.				Issue survived Lactation.			Issue Survived Lactation per Union.	First Born Children died during Lactation.			Issue died to Date.				Issue Survived to Date.			Issue Survived to Date per Union.
		Males.	Females.	Total.		Males.	Females.	Total.	Per cent.	Males.	Females.	Total.		Males.	Females.	Per cent.	Males.	Females.	Total.	Per cent.	Males.	Females.	Total.	
Umba	50	51	41	92	1.8	6	8	14	15	45	33	78	1.5	3	2	14	14	12	26	28	37	29	66	1.3
Yendat	23	29	28	57	2.4	7	4	11	19	22	24	46	2.0	3	1	9	10	7	17	29	19	21	40	1.7
Lang-lida	45	50	39	89	1.9	1	3	4	4	49	36	85	1.8	1	2	5	7	7	14	15	43	32	75	1.6
Lesu	52	110	84	194	3.7	9	19	28	14	101	65	166	3.1	1	4	8	26	31	57	29	84	53	137	2.6
Amba	27	34	31	65	2.4	1	3	4	6	33	28	61	2.2	2	1	10	4	12	16	24	30	19	49	1.8
Letatan	37	50	37	87	2.3	6	5	11	12	44	32	76	2.0	1	1	10	10	10	20	23	40	27	67	1.8
Lemasong	74	65	62	127	1.7	10	8	18	14	55	54	109	1.4	2	1	7	19	18	37	29	46	41	90	1.2
Komot	54	75	77	152	2.8	12	8	20	13	63	69	132	2.3	1	1	6	23	20	53	34	52	47	99	1.7
Komokin	44	30	26	56	1.2	4	4	8	14	26	22	48	1.0	2	2	16	16	14	30	53	14	12	26	0.5
Pinginndu	110	72	69	141	1.2	8	5	13	9	64	64	128	1.1	4	4	8	16	10	35	24	56	50	106	0.9
Tekirel	33	27	17	44	1.3	..	..	..	..	27	17	44	1.3	..	..	..	5	3	8	18	22	14	36	1.0
Katendan	41	33	35	68	1.6	7	8	15	22	26	27	53	1.2	2	1	11	10	10	20	29	23	25	48	1.1
Lambuso	72	54	45	99	1.3	10	12	22	22	44	33	77	1.0	6	4	21	12	19	31	31	42	26	68	0.9
Malem	96	76	53	129	1.3	10	8	18	13	66	45	111	1.1	5	3	12	21	13	34	26	55	40	95	0.9
Lasigi	49	36	45	81	1.6	13	8	21	25	23	37	60	1.2	7	4	29	20	15	35	43	16	30	46	0.9
Watkana	96	87	55	142	1.4	18	6	24	16	69	49	118	1.2	12	1	19	38	22	60	42	40	33	82	0.8
Kanagunagnus	9	23	16	39	4.3	6	5	11	28	17	11	28	3.1	4	0	44	12	8	20	51	11	8	19	2.1
Livinke	36	51	36	87	2.4	14	10	24	27	37	26	63	1.7	..	2	7	24	21	45	51	27	15	42	1.1
Kandan	28	32	22	54	1.9	6	2	8	14	26	20	46	1.6	1	..	5	18	7	25	46	14	15	29	1.0
Limbin	85	62	65	127	1.5	11	17	28	22	51	48	99	1.1	5	5	18	16	22	38	29	46	43	89	1.0
Kantebu	35	32	19	51	1.4	10	7	17	33	22	12	34	0.9	4	3	26	16	11	27	52	16	8	24	0.6
Bembuwe	39	32	19	51	1.3	10	5	15	29	22	14	36	0.9	8	3	37	16	8	24	47	16	11	27	0.6
Lemaris	39	31	31	62	1.5	10	7	17	27	21	24	45	1.1	4	1	23	19	22	41	66	12	9	21	0.5
Kanandu	50	73	42	121	2.0	34	10	44	36	45	32	77	1.3	6	2	22	42	20	62	51	37	22	59	1.0
Watlanu	44	36	31	61	1.3	8	5	13	21	28	20	48	1.0	6	3	31	11	7	18	29	19	24	43	0.9
Pavatgin	42	41	52	93	2.2	20	31	51	54	19	21	40	1.0	10	3	39	28	39	67	70	15	13	28	0.6
Datinot	35	25	34	59	1.6	6	16	22	37	19	18	37	1.4	5	3	31	11	20	31	52	14	14	28	0.8
Silem	25	18	20	38	1.5	3	3	6	15	15	17	32	1.2	1	2	14	6	4	10	26	12	16	28	1.1
Katenda	29	18	27	45	1.5	1	6	7	15	17	21	38	1.3	1	1	11	5	11	16	35	13	16	29	1.0
Buto	24	26	22	48	2.0	2	5	7	14	24	17	41	1.7	..	3	18	5	11	16	33	21	11	32	1.3
Legon	38	40	41	90	2.3	9	7	16	17	40	34	74	1.9	2	4	19	22	9	31	34	27	32	59	1.5
Kanam	28	34	25	59	2.1	2	..	2	3	32	25	57	2.0	..	..	..	17	10	27	45	17	15	32	1.1
Karu	52	46	48	94	1.8	5	15	20	21	41	33	74	1.4	4	6	25	10	21	31	32	36	27	63	1.2
Total District of New Ireland, East Coast	3,073	3,276	2,819	6,095	2.0	623	567	1,190	19	2,653	2,252	4,905	1.6	244	156	18	1,101	1,059	2,250	37	2,085	1,760	3,845	1.3

3. NEW IRELAND, EAST COAST.—FRUITLESS UNIONS, ISSUE AND SURVIVAL OF FRUITFUL UNIONS, STATISTICS OF MASCULINITY.

Village Group.	Fruitless Unions.					Number of Unions with Total Issue of.										Average Issue per Fruitful Union.	Average Survival per Fruitful Union.	Sex Ratio Excess of Males over Females per cent. of Persons.					Females of Reproductive Age.	Old Persons		
	Total Number.	Newly Married.	Husband works away.	Husband or Wife Dead.	Wife Still Young.	Apparently Sterile.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.			Births.	Infantile Mortality.	Mortality of Issue.	Survival of Issue.	Population Children under 14	Population Adults.		Males.	Females.	Total.
Kulangit	8	3	..	2	..	3	8	7	..	..	1	..	..	..	..	..	1.6	1.3	48	..	60	45	21	20	14	1	1	2
Bagail	20	8	2	3	..	7	11	6	2	1	2	1	..	1	..	..	2.3	2.0	8	−33	−11	12	5	28	27	2	1	3
Mungal	10	4	..	2	..	4	12	4	2	..	2	..	..	..	..	..	1.8	1.1	16	33	−7	30	14	17	11	3	7	10
Omo	25	10	1	6	..	8	23	14	11	..	2	1	..	..	..	..	2.1	1.5	5	−40	−27	18	18	20	38	9	13	22
Malom	7	1	2	2	..	2	12	4	5	2	1	1	..	..	..	..	2.1	1.8	7	..	33	2	4	23	17	6	10	16
Papliang	4	2	..	..	..	2	10	2	2	..	1	..	..	..	..	..	1.6	1.1	12	20	−25	9	..	25	16	5	5	10
Bobal	8	2	..	2	..	4	2	2	2	2	2	..	..	..	..	..	3.0	1.6	20	..	..	37	−50	2	14	1	3	4
Kapilimau	6	2	1	..	..	3	5	7	4	3	..	1	..	..	..	..	2.5	1.6	8	..	5	9	17	20	28	2	3	5
Kaselok	9	4	1	3	..	1	7	2	3	4	2	..	..	..	..	..	2.5	1.5	8	7	11	7	30	16	21	1	4	5
Putput	7	4	..	1	..	2	5	2	2	4	3	..	..	..	..	..	2.8	1.8	46	−6	−10	30	22	61	17	3	5	8
Nono	5	3	..	2	..	..	10	1	3	2	6	2	..	..	..	..	2.4	1.3	15	55	25	7	33	14	22	2	3	5
Ngavelus	12	6	2	1	..	3	4	3	3	3	2	1	1	..	..	..	3.1	1.9	−3	..	14	−15	5	9	18	6	6	12
Lovong-ai	6	1	1	2	..	2	9	13	4	12	4	3	1	1	..	..	3.1	2.0	17	35	33	9	7	15	28	12	17	29
Losuk	4	..	..	2	..	2	12	5	2	1	4	3	..	1	..	..	3.1	1.2	−5	−37	−25	24	36	15	16	3	17	20
Mangal	13	2	1	3	..	7	7	9	7	2	3	..	1	..	..	..	2.6	1.5	−2	20	18	−18	−25	23	24	6	10	16
Livitua	11	1	1	2	..	7	6	5	3	6	6	4	1	..	..	..	3.5	2.1	27	36	31	24	8	29	17	12	24	36
Laowan	14	4	2	8	..	5	5	4	3	6	5	3	1	..	..	1	3.3	1.7	9	15	11	7	17	11	27	5	12	17
Vongararun	12	2	..	5	..	5	9	4	6	5	6	2	2	..	..	..	2.7	1.6	−8	8	−3	2	3	8	26	13	19	32
Farnai	7	2	1	..	1	..	6	1	2	5	5	3	4	1	..	..	3.5	2.0	−5	13	13	..	9	13	25	6	7	13
Lakurafanga	4	..	..	..	..	2	1	4	2	2	6	..	1	1	..	..	3.4	2.1	−3	..	20	18	30	40	13	2	1	3
Nanapai	4	1	..	..	..	1	8	2	5	3	1	4	2	1	1	..	3.1	2.2	4	..	16	27	20	17	15	11	11	22
Hali	6	1	..	3	..	..	7	5	2	3	3	1	..	1	..	1	2.8	1.7	6	9	5	14	12	25	12	2	9	11
Lamekut	15	2	2	4	..	7	10	9	4	4	1	1	2	..	..	..	2.9	2.1	1	50	16	7	2	15	24	8	17	25
Fongalava	10	5	1	..	..	4	7	5	5	4	1	1	2	..	..	..	2.7	1.9	8	40	26	21	3	16	24	7	13	20
Luburua	2	..	1	..	..	1	2	7	2	6	1	2	..	..	..	..	3.4	2.2	2	25	16	12	..	20	17	3	7	10
Lakuruma	14	..	3	3	..	8	23	10	10	10	7	3	..	1	1	..	3.0	1.7	8	6	14	4	1	15	45	26	24	50
Munuwai	25	6	1	8	..	11	10	7	9	7	4	4	2	1	1	..	3.5	1.8	7	18	20	3	10	14	44	9	17	26
Larai Ilina	10	3	..	3	..	4	11	7	6	6	2	2	1	1	..	..	3.0	1.5	..	6	3	5	7	5	24	4	12	16
Lugagun	12	4	..	3	..	5	14	11	9	7	1	5	2	2	..	..	3.2	1.7	7	1	11	3	3	17	44	8	8	16
Matina	11	1	4	..	2	4	8	11	11	11	5	5	2	..	..	1	3.3	2.3	15	36	34	6	4	13	40	13	19	32
Luaupul	10	2	4	..	2	2	6	10	11	13	10	2	2	..	..	..	3.3	1.7	4	38	22	13	25	18	41	6	18	24
Fiera	20	6	5	..	2	5	11	5	10	7	4	2	2	..	..	..	3.2	2.0	12	47	1	20	17	11	41	5	25	30
Kafkaf	10	4	1	..	2	3	6	4	5	6	3	3	..	..	..	..	3.0	2.0	11	60	16	27	29	13	21	8	8	16
Fatmilak	24	12	..	6	..	6	18	13	20	10	7	3	3	..	..	..	2.7	2.3	3	60	18	6	..	..	73	16	26	42
Limalaua	10	1	4	1	..	4	5	11	6	4	4	2	2	..	..	..	2.9	1.8	3	16	..	5	11	10	30	10	9	19
Tandis	10	3	1	..	..	4	10	10	7	7	4	1	2	..	..	..	2.4	1.8	19	50	60	6	9	20	26	11	14	25
Limba	15	6	4	1	..	4	10	8	7	5	5	..	..	..	..	..	2.6	1.8	10	14	7	12	12	14	42	8	10	18

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3. NEW IRELAND, EAST COAST.—FRUITLESS UNIONS, ISSUE AND SURVIVAL OF FRUITFUL UNIONS, STATISTICS OF MASCULINITY—*continued*.

Village Group.	Fruitless Unions.						Number of Unions with Total Issue of.										Average Issue per Fruitful Union.	Average Survival per Fruitful Union.	Sex Ratio Excess of Males over Females per cent. of Persons.						Females of Reproductive age.	Old Persons.		
	Total Number.	Newly Married.	Husband works away.	Husband or Wife Dead.	Wife still Young.	Apparently Sterile.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.			Births.	Infantile Mortality.	Mortality of Issue.	Survival of Issue.	Population Children under 15.	Population Adults.		Males.	Females.	Total.
Vendak	3	3	1	..	..	..	4	2	10	1	3	..	..	..	..	..	2.8	2.0	1	27	17	6	7	6	19	3	5	8
Lang-inis	8	..	1	2	..	5	12	13	4	5	1	1	1	1	..	..	2.4	2.0	12	50	..	1	17	22	25	12	15	27
Lassu	6	..	1	..	..	5	10	15	13	14	6	1	2	1	..	..	3.1	2.8	15	35	8	22	17	16	22	16	21	37
Amba	5	..	..	..	..	1	6	8	2	4	3	1	..	..	..	..	2.7	2.6	4	50	50	22	22	20	10	7	10	17
Letatan	5	..	2	..	..	3	4	6	9	5	1	..	..	..	..	..	2.6	2.3	14	9	..	10	7	12	21	6	13	19
Lemasong	18	..	6	3	..	9	21	18	6	5	4	3	..	..	..	..	2.2	1.6	2	11	2	2	2	18	50	27	17	44
Konnos	8	2	..	..	3	3	7	12	7	6	6	..	1	..	..	..	2.3	2.1	1	20	13	5	16	..	29	18	23	41
Komolon	10	4	..	11	..	4	8	8	5	8	1	1	..	..	..	..	2.2	1.6	7	..	6	7	32	25	14	17	14	31
Pinigindu	38	..	5	11	4	20	37	17	9	6	2	1	1	..	..	..	1.9	1.4	2	23	8	5	11	..	38	27	30	57
Tekirot	15	2	1	6	..	7	6	8	5	3	1	2	..	..	..	..	2.4	2.0	22	..	25	22	8	9	20	4	7	11
Katendan	15	5	1	4	..	5	6	8	3	3	3	1	..	..	..	..	2.6	1.8	3	6	..	4	4	10	25	5	8	13
Lambuso	26	4	..	11	5	6	18	12	10	4	1	1	..	..	..	..	2.1	1.4	9	9	22	23	6	14	28	13	15	28
Malom	30	14	5	8	1	2	32	18	8	6	..	1	1	..	..	..	1.9	1.4	17	11	23	15	22	10	40	18	26	44
Lasigi	12	2	1	2	..	7	15	7	10	4	2	1	1	..	..	..	2.1	1.2	11	23	14	30	20	9	27	9	13	22
Watkana	29	16	2	..	1	8	23	24	14	3	2	..	1	..	..	..	2.1	1.2	22	50	26	19	35	5	42	22	21	43
Kanagnusgnus	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2.0	2.0	..	..	..	..	..	..	..	..	..	..
Liviako	10	2	..	6	..	2	7	4	2	2	1	..	..	..	1	..	2.0	1.6	17	16	6	28	6	..	9	6	8	14
Kandan	6	..	..	6	..	..	7	4	2	2	1	..	..	..	..	..	2.0	1.4	16	20	44	8	20	..	21	6	14	20
Limbin	20	10	..	13	1	1	21	15	6	3	2	1	..	..	..	..	1.9	1.6	..	15	8	27	15	..	17	9	7	16
Kettebu	9	1	..	4	1	3	14	4	5	1	2	..	..	..	..	..	1.6	0.9	26	17	18	33	36	6	29	23	17	40
																									19	4	12	16
Bumbuwe	10	1	..	2	3	4	18	7	5	2	..	1	..	..	..	..	1.7	0.9	24	33	33	18	6	6	14	6	15	21
Lemaris	16	6	..	7	2	1	7	5	1	2	1	..	..	..	..	..	1.9	1.0	..	17	7	14	50	12	14	10	10	20
Kanambu	23	6	..	7	2	8	8	7	5	1	2	2	..	1	..	..	2.3	1.6	30	54	35	25	31	20	24	17	11	28
Watiamo	15	2	..	5	1	6	10	11	5	1	2	..	..	..	..	..	1.7	1.4	1	25	22	11	..	9	19	10	12	22
Peastgin	9	..	..	3	3	3	12	3	6	3	4	3	3	..	..	..	2.6	0.8	9	21	16	7	..	1	22	12	6	18
Dabinok	10	1	..	3	1	5	6	11	6	3	3	1	..	..	1	..	2.3	1.1	16	46	29	..	..	20	12	10	7	17
Siom	9	1	1	3	1	3	5	6	2	3	1	..	..	..	..	..	2.3	1.7	5	..	20	14	9	4	19	5	7	12
Katenda	12	3	1	3	..	5	2	6	3	4	..	..	..	..	..	..	2.6	1.7	20	71	37	10	..	8	16	8	7	15
Bube	8	3	..	6	..	2	3	5	3	3	2	..	1	..	..	..	3.0	2.0	8	42	37	31	27	17	11	7	7	14
Logon	7	4	..	1	..	2	3	2	3	2	5	1	..	..	..	..	2.9	1.9	8	13	41	8	20	20	25	5	5	10
Kanam	8	4	1	1	..	2	5	4	3	4	3	..	..	..	..	..	2.9	1.8	5	..	29	5	10	7	12	5	13	18
Karu	12	4	..	3	..	5	18	6	6	5	3	..	..	..	..	..	2.3	1.5	2	50	36	14	2	23	27	7	11	18
Total District of New Ireland, East Coast	335	228	77	205	41	284	690	502	289	217	132	95	22	21	6	4	2.7	1.7	7	8	6	8	7	13	1,779	603	815	1,419

3:Chinnery G, E-5 (1929)1931 OM10 New Ireland OM10

161 conditions and demands the co-operation of the natives themselves will have many obstacles placed in its path, not the least of which will be a disheartening lack of interest on the part of the people whose improvement is sought.

FRUITLESS UNIONS.

163 Out of 3,073 unions investigated by me for the purpose of estimating issue and survival rates 835 or 27 per cent. were fruitless. When one goes into the reasons for fruitlessness, this figure is not so alarming as it at first appears. Of the fruitless unions, 228 or 27 per cent. are newly married, and likely to be productive within the next year or so. In 77 cases, or 9 per cent., the male partner is absent working and on return of the absentees the unions or at any rate a proportion of them may become fruitful. In 205 instances, or 24 per cent., either the male or the female partner is dead. Where the female has survived, a certain proportion may be expected to re-marry and of these some may possibly have issue. In 41 cases, or 5 per cent., the female, though married some time, is not looked upon by the other inhabitants of the village as being sterile; a certain proportion of these unions may also be expected to contribute issue. The balance of the fruitless unions 284, or 34 per cent., is regarded by the people as definitely sterile either through old age or on account of some physical disability.

FRUITFULNESS OF UNIONS.

The total issue is due therefore to 2,238 fruitful unions, which gives an average issue per fruitful union of 2.7, of whom 1.7 per union have survived. In working out the fruitfulness of the unions, I find that 690 have had an issue of 1 child each, 502 have had an issue of 2 children each, 389 have had an issue of 3 children each, 317 have had an issue of 4 children each, 182 have had an issue of 5 children each, 95 have had an issue of 6 children each, 32 have had an issue of 7 children each, 21 have had an issue of 8 children each, 6 have had an issue of 9 children each, and 4 have had an issue of 10 children each. There are considerable fluctuations in the issue and survival rates among the different villages. As a rule, the villages on the lower end of the road have small issues, high infant mortality and low survivals. In these villages I made special investigations, and found conditions of hardship consistent with the poverty in issue and survival. Certain villages in Kavieng itself also have a low survival rate, but here the issue rate is low, and the mortality rate not heavy.

INFANT MORTALITY.

165 According to the census, 19 per cent. of the children (6,096) of the unions (3,073) investigated, died during the period of lactation (2 years). This compares favorably with the figures resulting from an inquiry made by me some time ago in the Duke of York group

4: Powdermaker E-5 (1929-1930)1931 OM10 New Ireland OM10
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working on coconut plantations. Among the adults there were six widowers and seven widows (mostly old). There was thus a total population of 222 (eleven of whom were absent) living in 66 households.

RESULTS OF THE STUDY

Birth Data

Table 1, which follows, presents the average number of offspring for all women and for each fruitful woman for three generations. As noted earlier, the females studied were divided into four groups according to their generation, those called *I* being dead, *II* old, *III* middle-aged, and *IV* young. The last group is omitted from the following table because the women are too young to have completed their childbearing period. Those unions in which the marriage was of short duration because of divorce or the death of the husband, (and no record was found of the woman's subsequent re-marriage), and those in which the woman died before the end of her childbearing period are omitted. The number of the former are 17 and the latter 23.

TABLE 1

Birth Rates

GENERATION	TOTAL NUMBER OF WOMEN	NUMBER OF OFFSPRING	AVERAGE NUMBER OF OFFSPRING PER WOMAN	NUMBER OF FRUITFUL WOMEN	AVERAGE NUMBER OF OFFSPRING PER FRUITFUL WOMAN
I	150	431	2.8 ± .119	142	3.
II	90	194	2.1 ± .159	74	2.6
III	55	150	2.7 ± .26	44	3.4
Totals	295	775	2.6	260	2.9

From the above table it appears that the people studied have had a practically stable birth rate for three generations: an average for the three groups of 2.6 per woman and 2.9 per fruitful woman. This is slightly higher than the rate given in the recent government census, the average issue per union being given there as 2.0 and per fruitful union as 2.7.[6] If the issue rate of generations *II* and *III* (which cor-

[6] Chinnery, E. W. P.—Anthropological Report, No. 6, Territory of New Guinea. In print.

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114 163 responds more closely to the people on whom the government census was taken) is averaged, the difference between that and the rate given in the census is even less.[1] Since there is such close agreement between the figures computed by two different methods, it would seem that the issue rate, at least for the women of generations *II* and *III*, is fairly accurate. But there are no comparable figures for the issue rate of the women in generation *I*, and it is here that there is the largest possibility of error, because the principals are dead and could not be used as informants.

163 If the women of all three generations are classified according to their number of offspring, as in the following table (No. 2), it will be seen that the birth rate for the larger number of women is slightly higher than the average rate as given in Table 1.

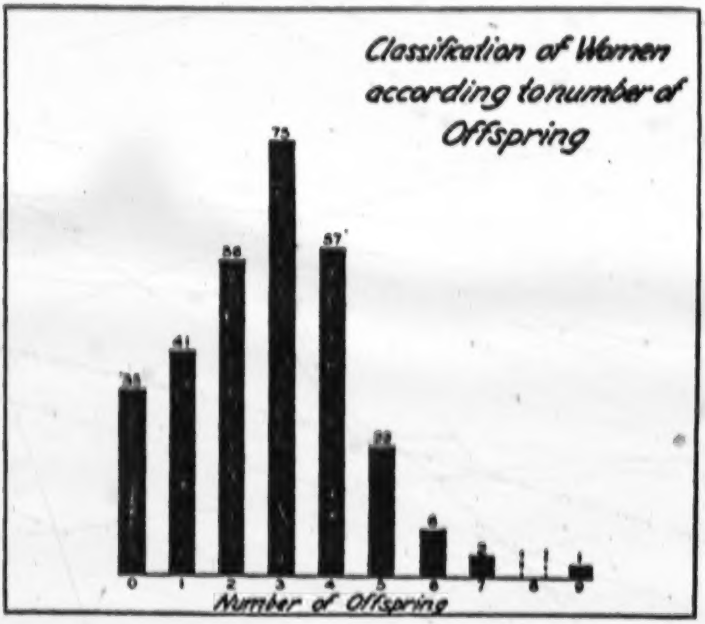

CHART I

[1] The difference is 0.4 per woman and 0.3 per fruitful woman.

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TABLE 2

Distribution of Women by Number of Offspring

											TOTALS
Number of women	35	41	56	75	57	22	6	2	0	1	295
Per cent of women	11.8	13.9	19.	25.4	19.4	7.4	2.	0.7		0.3	99.9
Number of offspring	0	1	2	3	4	5	6	7	8	9	775

Of the 295 women, the largest group have three children and the next largest groups have four and two offspring respectively. Very few of the women have more than five offspring.

While the average issue rate for the women of this study seems very low, it does not vary very much from the rate of fecundity for the native-born women in the United States in recent times. Statistics on this subject are available only for certain sections of the country and for certain classes of people. In 1905, in Rhode Island, the average number of children born to native-born married women was 2.06 and to foreign-born married women 3.35.[8] From the census of 1900 a study of fecundity was made for the region including the state of Rhode Island, the cities of Cleveland and Minneapolis, 48 mainly rural counties of Ohio, and 21 mainly rural counties of Minnesota. The women of native white parentage had 2.7 children, while those of foreign parentage had 4.4 children.[9] The number of children per married couple of Yale graduates in the period 1881-90 was 2.04.[10] (The fertility of foreign-born stock in the United States is much higher and ranges from 6.2 for the Poles, to 3.4 for the English.[11]) It would seem that the fecundity of the Melanesians in New Ireland, while low, is about equal to that of the native-born whites of this country. Now, according to Carr-Saunders, fecundity has increased with civilization. He presents no statistical evidence for this theory, but he gives much suggestive evidence from primitive people all over the world.[12] The low rate of fecundity among the native-born white women of the United States is probably due to the use of contraceptives and cultural factors, such as

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[8] Holmes, S. J., The Trend of the Race, *N. Y.*, 1921, p. 125.
[9] *Ibid.*, p. 127.
[10] *Ibid.*, p. 136.
[11] *Ibid.*, p. 128.
[12] Carr-Saunders, A. M., The Population Problem, *Oxford*, 1922, pp. 92-105.

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163 [171] economic conditions, time of marriage, etc., and does not therefore invalidate Carr-Saunders' theory.

Although it is not absolutely certain, it appears that the people of this study have maintained a stable birth rate over three generations, yet at the same time there seems to be an increase in the percentage of sterile women. If the number of sterile women are grouped according to their generation, the percentage of sterility over the three generations can be measured. Table 3 presents this.

TABLE 3

Sterility Rates

GENERATION	NUMBER OF STERILE WOMEN	PER CENT OF WOMEN WHO ARE STERILE
I	8	5.3
II	16	16.6
III	11	20.
Totals	35	11.8

It can be seen that the percentage of sterile women jumps from 5.3 per cent to 20 per cent in three generations.[18] There is not the same possibility for error in this rate as there is in the issue rate for the women of generation *I*, for if the informants forgot to give children of these dead women, it would have made the sterility rate higher than it should be and the corresponding increase in sterility to the present time would be still greater. The same fault of memory would have made the fecundity of these women lower than it should be, and there is thus the possibility that the birth rate may have declined instead of being stable. The error could only be one way and we know therefore that the birth rate has not increased.

163 164 It is the opinion of the writer that the low rate of fecundity and the increase of sterility among these Melanesian women may be due to the introduction of syphilis and gonorrhoea, usually the accompaniment

[18] cf. Pitt-Rivers, G. H. L. F., The Clash of Culture, *London*, 1927, Table IV, Appendix II, taken from Indian Population of the U. S. and Alaska, 1910, p. 157. The sterility for North American Indian and mixed-blood women between the ages of 15 and 44 years, and married one year or more, varies from 4.3 to 16.6, the highest percentage falling among the marriages of full-bloods.

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of white civilization. Gonorrhoea is considered the cause of a large percentage of sterility, and when not causing complete sterility frequently limits the family to one or two offspring. There is a difference of opinion on the effect of syphilis on the pregnant woman and her offspring, but there appears to be evidence that syphilis tends to reduce the number of pregnancies. In a study made on syphilitic and non-syphilitic families, the number of pregnancies in syphilitic families was 2.58 compared with 3.8, 4.4 and 5.5 in non-syphilitic families.[14] The evidence for the presence of these diseases among this people, and their further connection with the vital statistics will be discussed in the latter part of this paper. Here it is only necessary to indicate a possible relationship between them and the birth and sterility rates.

Death Data

Having learned that the birth rate has not increased, i.e., that it is either stable or declining, it is of interest to note the death rate for the same people. The following table presents the number and percentage of those born in each of the three generations who died before marriage. The time of death is indicated by the physiological periods described in the introduction.

TABLE 4

Death Rates Based on Number of Births

GENERATION	BORN DEAD		DIED DURING LACTATION PERIOD		DIED DURING CHILDHOOD		DIED DURING YOUTH		DIED AS YOUNG MAN OR WOMAN		TIME OF DEATH UNCERTAIN		TOTAL DYING BEFORE MARRIAGE	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
I	1	.2	13	3.	25	5.7	11	2.5	17	3.9	19	4.3	86	19.5
II	1	.5	11	5.4	12	5.9	3	1.5	1	.5	2	.1	30	14.9
III	3	1.8	24	14.9	6	3.6	2	1.2	4	2.4	1	.6	40	24.3
IV	1	.5	29	16.3	..	...	..	...	..	...	..	...	..	...
Totals	6	.6	77	7.9	43	5.4	16	2.	22	2.7	22	2.7	156	19.5

There has been an increase in the mortality over the three generations. Among the offspring of generation *I*, 19.5 per cent of those born died before reaching the age of marriage, while 24.3 per cent of the children of group number *III* have already died before marriage. This

[14] Solomon, H. C. & M. H.—Syphilis of the Innocent, *Washington*, 1922, p. 128.